香港科技大學
THE HONG KONG UNIVERSITY OF SCIENCE AND TECHNOLOGY

南方海洋科學與工程廣東省實驗室（廣州）香港分部
HONG KONG BRANCH OF SOUTHERN MARINE SCIENCE AND ENGINEERING GUANGDONG LABORATORY (GUANGZHOU)

Hong Kong Branch Seminar Series

Natural products and chemical synthesis

Prof. Wei-Min Dai
The Hong Kong University of Science and Technology

Title: Strategy toward Diverted Total Synthesis of Marine Macrolides and Analogues

Abstract: Marine organisms have been and will continue to serve as the valuable sources of structurally diverse secondary metabolites, which function directly as molecular probes for biomedical studies or serve as the lead compounds for development of pharmaceutical products for treatment of human diseases. Due to the structural complexity of marine natural products and limited available quantities, modern instrumental methods such as NMR spectroscopy often fail in providing correct structural assignment of novel molecular entities. Chemical synthesis offers a powerful solution for structural determination, including absolute configuration, in marine natural products research. Moreover, chemical synthesis enables molecular editing (simplification) of complex natural products by synthesizing natural products-like compounds of less structural complexity for drug discovery and development. In this general presentation, examples from both the current literature and the speaker's research lab will be used to illustrate (a) the challenge and advancement in structural determination of natural products; (b) the opportunity of chemical synthesis in chemical biology studies; and (c) contribution of chemical synthesis in marine natural products research and drug development. Enhancement of chemical synthesis efficiency is the key theme of contemporary chemical research and a multimodule assembly strategy will be discussed for efficient diverted total synthesis of marine macrolides and analogues in the speaker's lab.

28 October 2020 (Wednesday)
9:30-10:30 am (GMT +8)
https://hkust.zoom.us/j/94329106583
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